AIR CAV

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“HOW WE FIGHT”

ALWAYS

PURPOSE

Provide information on the mission, characteristics, and capabilities of a Regimental Aviation Squadron

SEQUENCE OF BRIEFING

Mission
METL
Squadron Task
Organization
Major Systems
Methods of Employment
Conclusion

4TH SQUADRON MISSION STATEMENT

On order, deploys rapidly and conducts reconnaissance, screen, and air movement anywhere in the world; prepared to fight upon arrival.

SQUADRON METL

- Conduct Tactical Deployment/Redeployment
- Perform Tactical Reconnaissance
- Provide a Screen
- Perform Hasty Attack
- Perform CSS and Sustainment
- Exercise Command and Control
- Protect the Force

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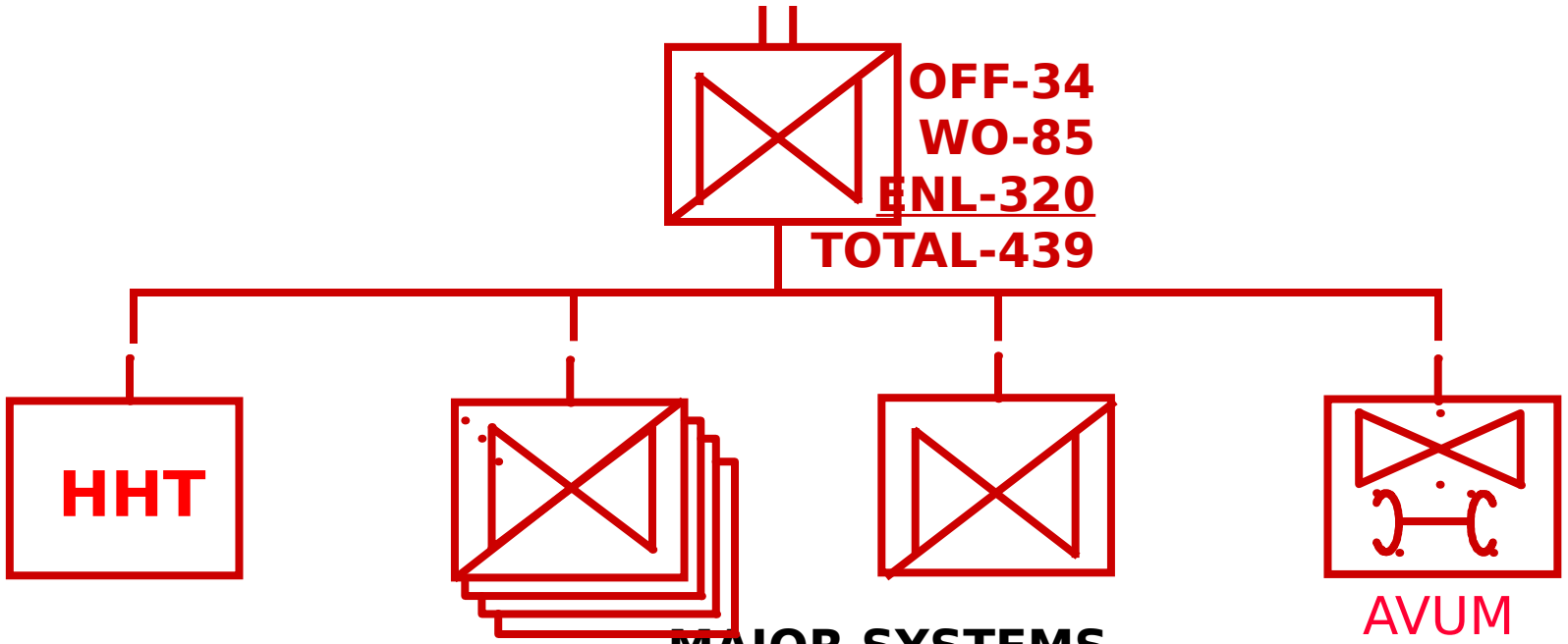
REGIMENTAL AVIATION SQUADRON



MAJOR SYSTEMS

- **29 OH-58D**
  - ***Laser Designators***
- **15 UH-60A**
  - ***2 Volcano***
  - ***Command Console***

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AIR CAV TROOP

OFF-3
WO-13
ENL-11
TOTAL-27

HQ

MAJOR SYSTEMS

- 8 .50 cal MG
- 8-16 2.75” (7 shot) Pods
- Hellfire Missiles
- ATAS
- 8 OH58D
- 2 HMMWV
- 1 5 Ton

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Equipment Characteristics

OH-58D Kiowa Warrior

TOUJOURS PRET

Armament	
Ammunition	**Range**
Hellfire Anti-tank LASER Guided Missile	8,000m
2.75' Folding Fin Aerial Rocket	7,000m
.50 Caliber Machine Gun	2,000m
Air-to-Air Stinger Missile	5,000m

Mast Mounted Sight (MMS)		
Component	**Capability**	**Range**
Thermal Imaging System (TIS)	Detection	10+ km
	Recognition	6-7 km
	Identification	3 km
Television System (TVS)	Detection	8+ km
	Recognition	7 km
	Identification	4-6 km
Laser Range Finder and Designator	Max Ranging	9.99 km

General Aircraft Characteristics	
Characteristic	**Remarks**
Speed	125 knots max; 80-90 knots normal cruise. Nap of the earth flight, 40 knots and slower
Endurance	2 hours with a full load of fuel; limited ammunition with full load of fuel
Range	413 km one way, no station time
Wind Limitation	45 knots for starting
Turbulance	Moderate, based on the reporting aircraft

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Equipment Characteristics

OH-58D Kiowa Warrior

Capabilities

- Airborne Target Handover System (ATHS). Integrates data from the navigation system and the MMS and transmits it digitally to fire support digital systems as well as other digitally equipped aircraft.
- Airborne Video Tape Recorder (AVTR). This system records visual information displayed from the MMS sensors and cockpit audio from crew interaction and radio traffic on standard 8mm format tapes

Limitations

- Effects of infrared crossover on thermal sensors.
- Low ceilings and poor visibility can inhibit hellfire missile engagements
- Some conditions necessitate a fuel-for-ammo tradeoff

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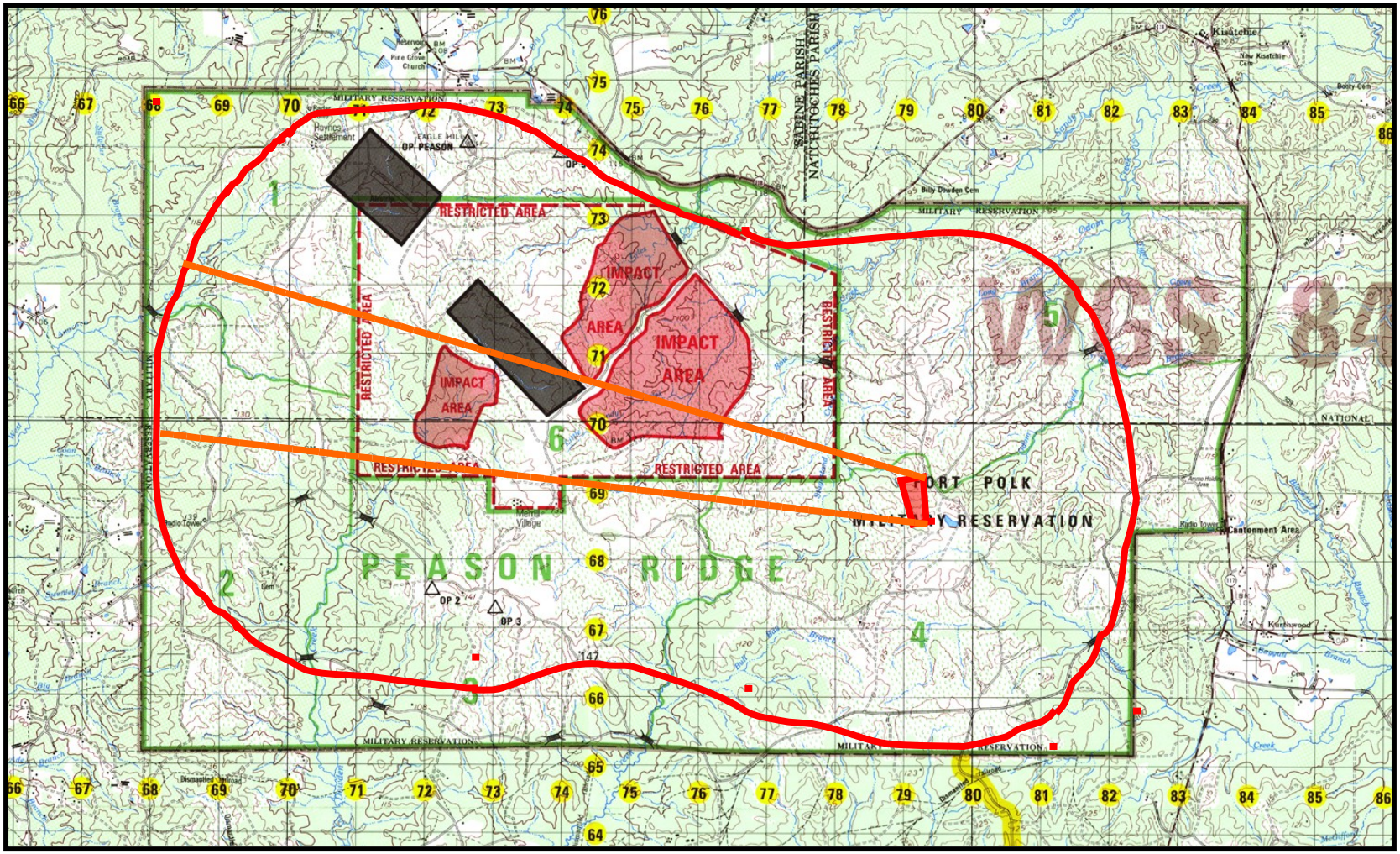
Hellfire SDZ

TOUJOURS PRET



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Hellfire Hit Rates

	Autonomous	Remote	G/VLLD Day	G/VLLD Night	Total
Lethal Sabre II MAY 00, Peason Ridge	39/101 (39%)	n/a	13/15 (87%)	n/a	52/116 (45%)
Valiant Sabre III JAN-FEB 01, Ft. Bliss	6/12 (50%)	6/8 (75%)	n/a	4/9 (44%)	16/29 (55%)
Lethal Sabre III APR 01, Peason Ridge	18/25 (72%)	6/7 (86%)	n/a	n/a	24/32 (75%)

Manufacturer advertises 90%

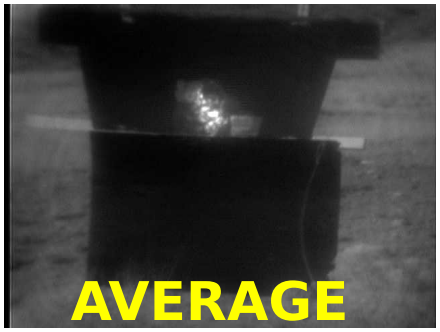
OH-58D
LASER QUALITY

Problem: 50% Hellfire Hit Rate

- Tests revealed poor laser spot quality
- 10/20 maintainers lack equipment and guidelines to identify problems

Solution:

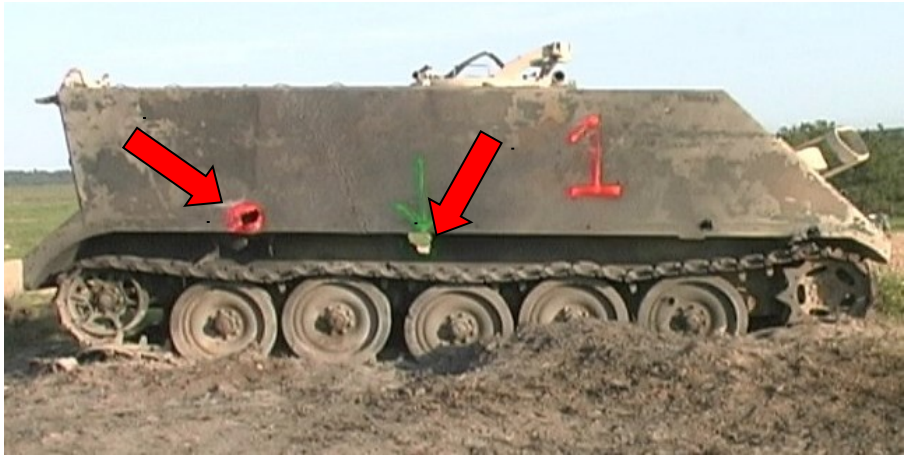
- Purchase IR camera and joulemeter
- Conduct pre-gunnery Hellfire screening
- Test lasers during scheduled maintenance



Outstanding Issues:

- What are minimum standards for spot jitter, size, and intensity?
- Is this a problem across the entire OH-58D fleet?
- Is this a problem with other systems? (G/VLLD, AH-64D)

Sample Hellfire Hits



Underspill

AIR CAV

RENEGADE TROOP

OFF-4
WO-26
ENL-35
TOTAL-65

HQ

MAJOR SYSTEMS

- 30 M60D MG
- 2 C2 Consoles
- ESSS Wing stores
- 15 UH-60A
- 3 HMMWV
- 1 5 Ton
- 2 Air Volcano

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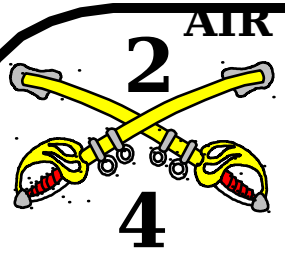
Equipment Characteristics

UH-60A Blackhawk

General Aircraft Characteristics	
Characteristic	**Remarks**
Speed	156 knots max; 120-145 knots normal cruise. Nap of the earth flight 40 knots and slower
Endurance	2.5 hours with no external fuel tanks
Range	592 km one way, without external fuel tanks
Max Cargo Weight	6,250 lbs. external and internal
Max. Passengers	11
Wind Limitation	45 knots for starting
Armament	2 x M60D 7.62 machine guns (door guns for self-defense)



Equipment Characteristics

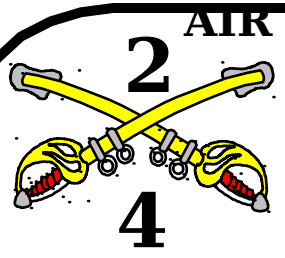
UH-60A Blackhawk

Capabilities

- The Extended Stores Support System (ESSS). This system allows configuration for extended operations without refueling (2 tanks = 5+ hours of station time).
- The Enhanced Command and Control Console. This configuration provides a maneuver commander with an airborne platform which supports 1 secure FM, 1 HF, 2 VHF, SATCOM, and 2 UHF radios.
- Air Volcano. Lays a 1100m x 120m minefield with 960 anti-tank and anti-personnel mines.

Limitations

- Use of ESSS for fuel limits access to the cabin doors for troops and cargo, reduces the payload capacity, and severely restricts the use of door guns for self-defense.
- UH-60A cannot slingload the TOW HMMWV variant most widely used in the Regiment.



2 ACR UH-60 Employment

MISSION	REQUIREMENT
HELTAC (Dragoon 6)	1x UH-60 (Console, ESSS)
AIRTAC (Sabre 3)	2x UH-60 (ESSS)
Air Volcano	2x UH-60 (Volcano)
DRT Insertion	4x UH-60
Typical Maintenance Cutline	
WETHAWK	1x UH-60 (ESSS)
CASEVAC	2x UH-60
RETRANS	2x UH-60
Orders/Rehearsal	1x UH-60
Logistics Resupply	2x UH-60
TOTAL:	17x UH-60

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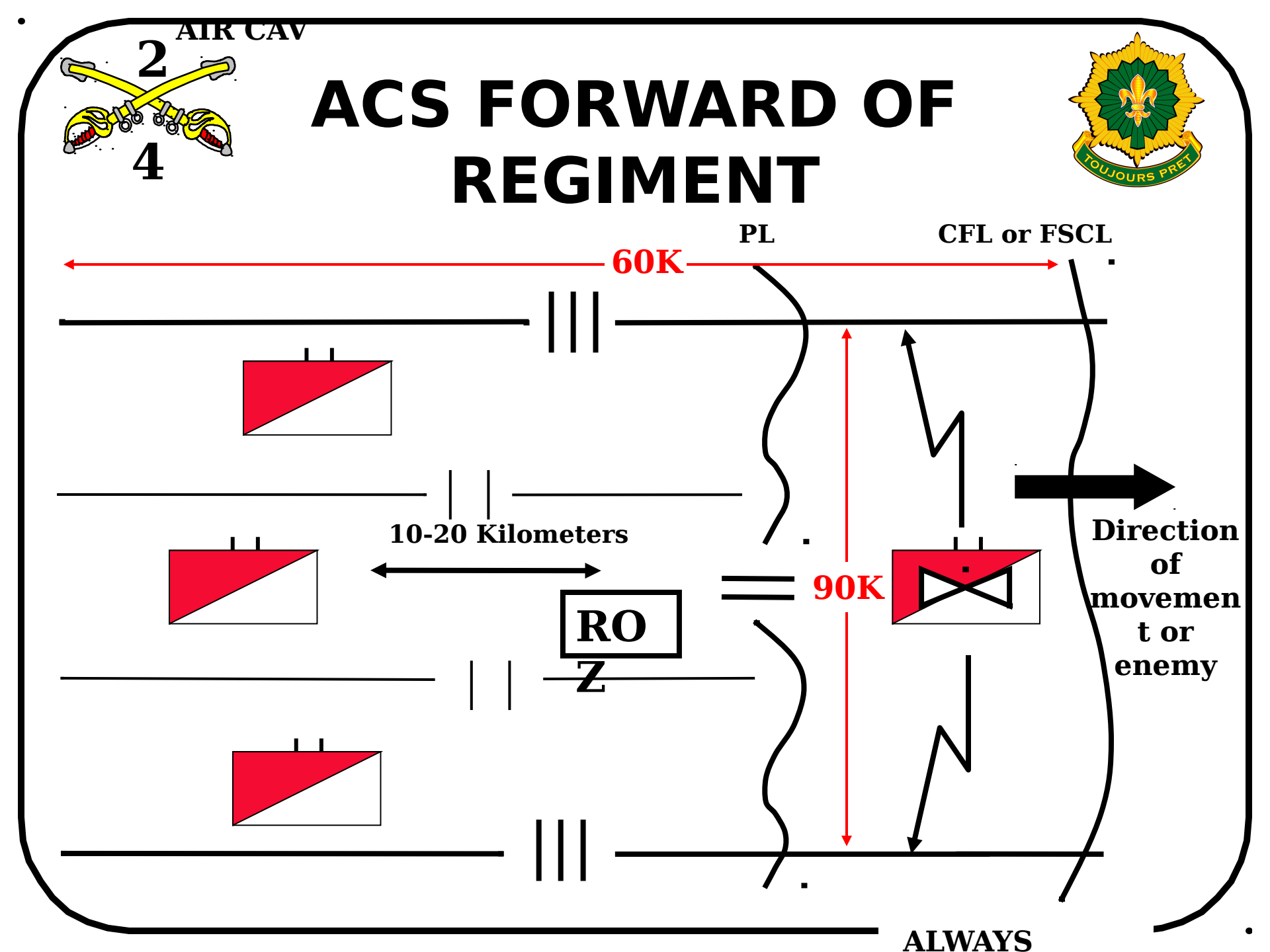
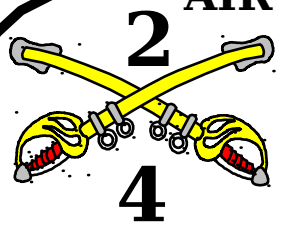

AIR CAV
2
4
ACS FORWARD OF REGIMENT
TOUJOURS PRET
PL
CFL or FSCL
60K
10-20 Kilometers
90K
RO
Z
Direction of movement or enemy
ALWAYS



GCT OPCON TO ACS

CFL or FSCL

(-)

(-)

RO

Z

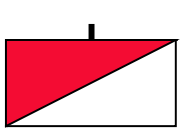
Direction of movement or enemy

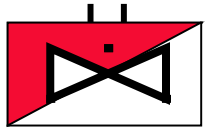
ALWAYS

AIR CAV

ACS IN AN ECONOMY OF FORCE

RO
Z





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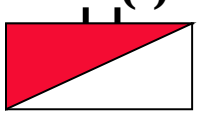
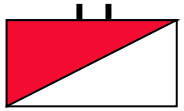
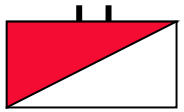




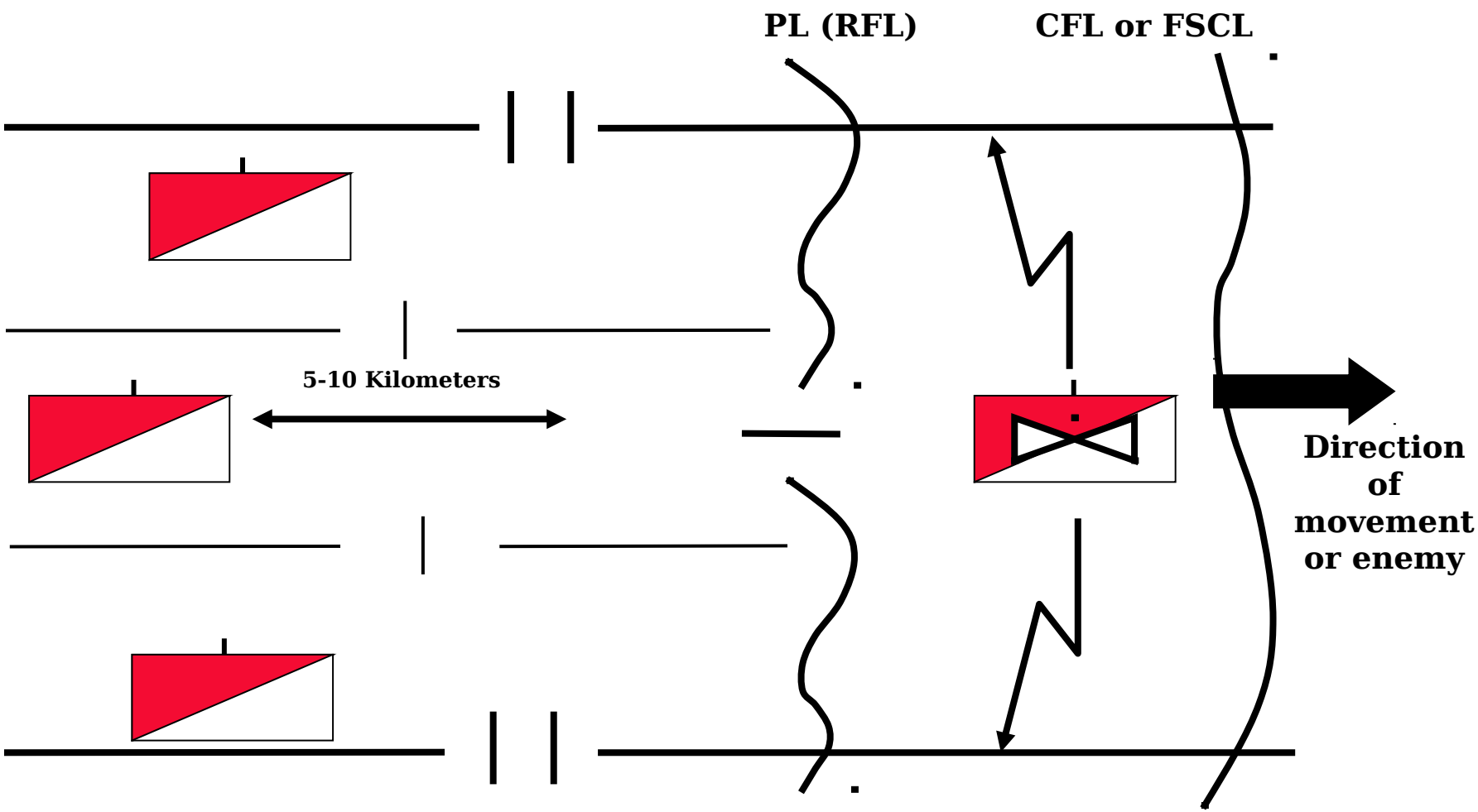


Direction of movement or enemy

ALWAYS

AIR CAV

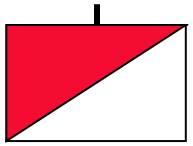
ACT OPCON TO GCS

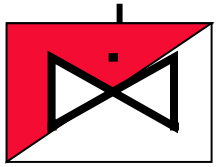


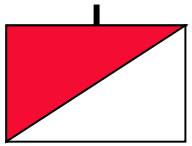
ALWAYS

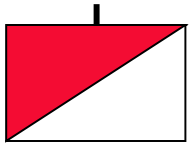
AIR CAV

ACT OPCON TO GCT









Direction of movement or enemy

ALWAYS

Fighter Management

ACT Capability

0600 1200 1800 0000 0600

EENT BMNT

COA 1 3 SWT | No Coverage | 3 SWT

Max Eyes: Daylight

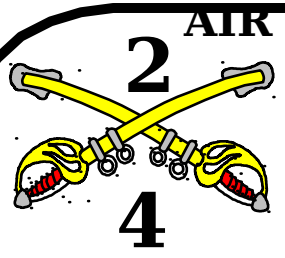
COA 2 No Coverage | 3 SWT | No Coverage

Max Eyes: Night

COA 3 1 SWT | 1 SWT | 1 SWT | No Coverag | 1 SWT

Max Time

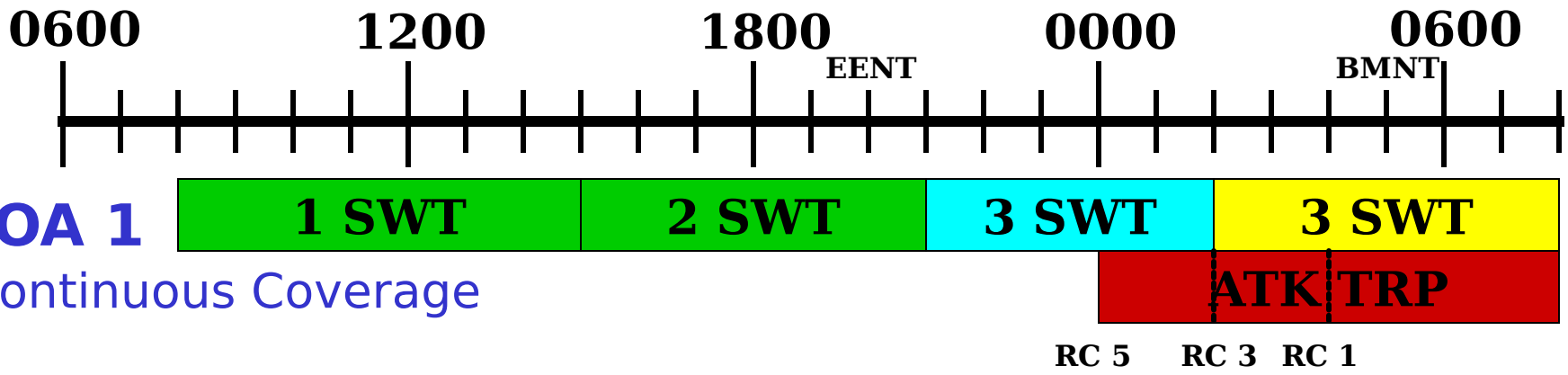
ALWAYS

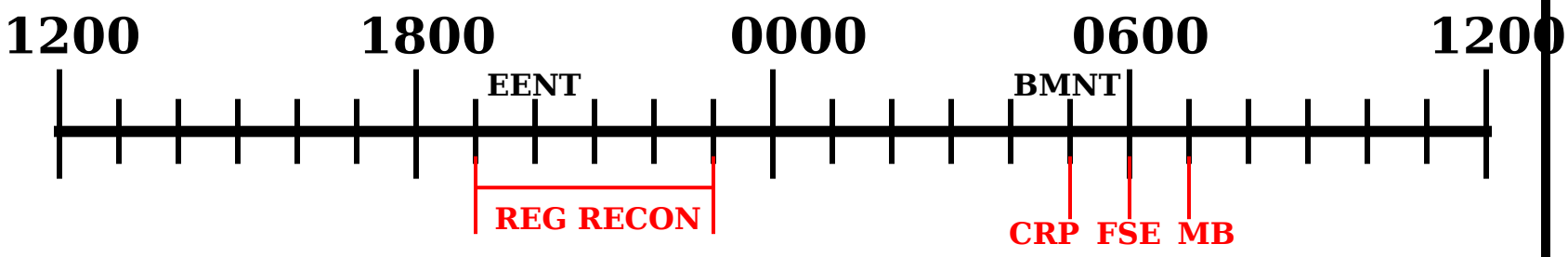


Fighter Management

SQDN Capability

Nomad | Outlaw | Palehorse | Quickstrike





ALWAYS

Fighting with Fires

PL OREGON

PL IDAHO

PL MONTANA

PL DAKOTA

TAA LION

Air Corridors allow 4/2 to tra
Fires within corridors requ
Units may fire *over*

A Squadron Boundary separates 4/2 from GCS's. Fires or effects crossing this boundary require coordination.

Aircraft remain 2500m from enemy artillery to facilitate counterfire.

PL OREGON

PL IDAHO

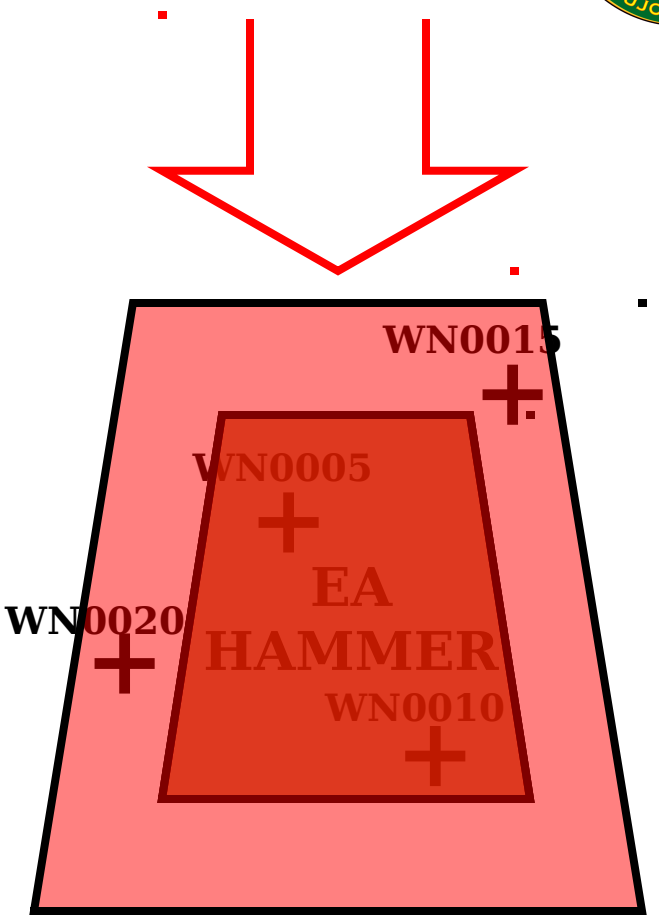
PL MONTANA

PL DAKOTA

ALWAYS

Engagement Areas

- The status of Engagement Areas change throughout a fight. Changes in status are achieved by a net call.
- An inactive EA is “green.” Aircraft may overfly the EA. Fires into a green EA must be cleared.
- An active EA is “red.” Aircraft must remain outside the EA. Fires into a red EA are precleared.
- Active EAs may be temporarily expanded (Red+1 or Red+2) to facilitate SEAD. Aircraft must remain outside expanded EA. Fires into expanded EA are precleared.



Communications

COA	COA	COA	COA 4: FSE forward
+ C	+ CI	+ 1	+ 2 FS Net to observers
- U	- No	- Lo	- 1 FS Net to REGT
- N	- Sp	- Sp	- Split Staff

PL OREGON
PL IDAHO
PL MONTANA
PL DAKOTA
2
RTOC
4
2
TOC
AIRTAC
4
2
FSE
ACT
ACT
ACT
CMD
FS(V)
FS(D)
PL OREGON
PL IDAHO
PL MONTANA
PL DAKOTA

ALWAYS

QUESTIONS?

AIR CAV

2

4

“HOW WE FIGHT”

TOUJOURS PRET

ALWAYS